TS715

single channel timeswitch

Installation & User Instructions

This product complies with the following EC Directives:
Electro-Magnetic Compatibility Directive.
(EMC) (89\336\EEC), (92\31\EEC)
Low Voltage Directive.
(LVD) (73\23\EEC), (93\68\EEC)

CE

Danfoss

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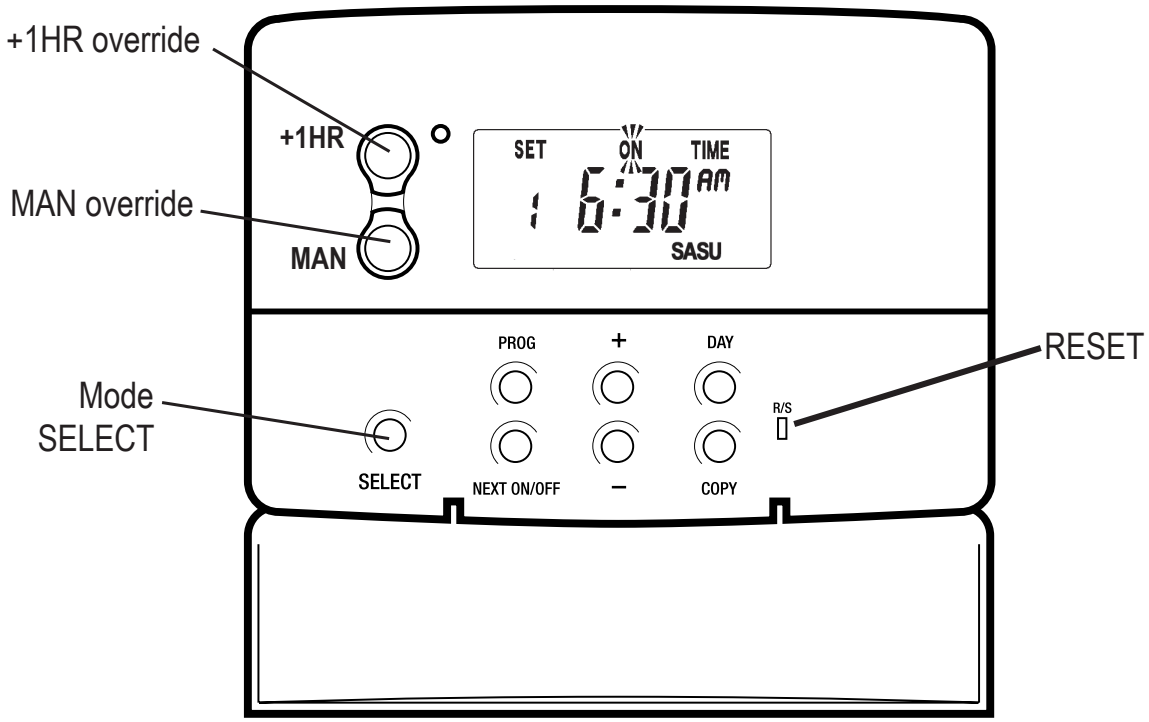


Installation Instructions

Please Note:

This product should only be installed by a qualified electrician or competent heating installer, and should be in accordance with the current edition of the IEEE wiring regulations.

Product specification

Specification	
Power supply	230 Vac, ±15%, 50/60 Hz
Switching action	1 x SPDT voltage free, Type 1B
Switch rating	Max 264 Vac, 3(1)A
Battery back-up	24 hours minimum
Setting/Running Accuracy	±1 minute
Dimensions, mm (W, H, D)	135 x 88 x 32
Design standard	EN 60730-2-7
Control Pollution Situation	Degree 2
Rated Impulse Voltage	2.5kV
Ball Pressure Test	75°C

Installation

- ❑ Remove wallplate from unit by unscrewing the two screws on the bottom edge of the unit.

- ❑ From the top left hand corner of the wallplate, there must be clearances of at least 140 mm to the right, 15mm to the left, 30mm above and 100mm below in order to mount the plug-on module.

- ❑ The wallplate must be securely mounted either directly to the wall using suitable wood screws or to a flush mounted 1-gang electrical accessory box using M3.5 screws.

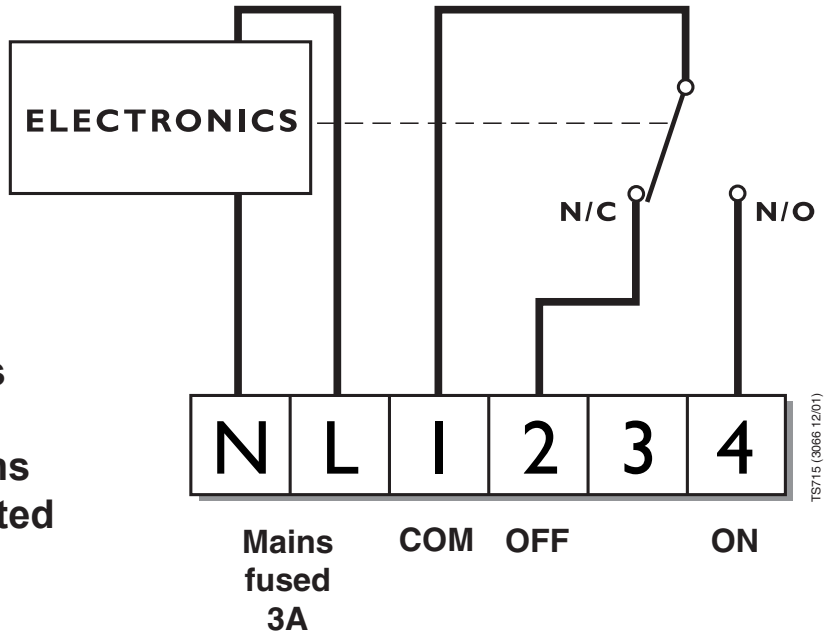
- ❑ Cable access can either be from behind for concealed cabling, or from below for surface cabling. If surface cable is used, cut out cable access slot on plug-on module prior to mounting the module.

- ❑ For wiring connections refer to diagram on page 5. TS715 models are double insulated and do not require an earth connection, however a parking terminal is provided on the wallplate. This is clearly marked with an Earth symbol.

- ❑ Prior to mounting the plug-on module, DIL switches on the rear of the plug-on module must be set. See diagram on page 5 for available options.

- ❑ Mount plug-on module to wallplate by locating tabs on top of wallplate in apertures on rear of module, hinge down and press firmly to wallplate before tightening securing screws on bottom of wallplate.

Wiring



NOTE:
Link terminals L and 1 for standard mains voltage operated systems

Always switch off mains first and never fit programmer to a live wallplate.

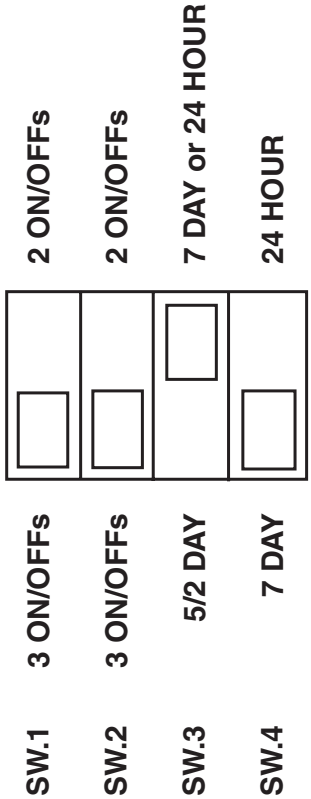
For Wiring Conversion tables see pages 6-9

DIL Switch Settings

Before mounting the unit, ensure the 4 DIL switches on the rear of the unit have been moved to the required settings

Remember to tick the INSTALLER SETTING box on the inside flap label to notify user in which mode their unit is set (24hr, 5/2 day or 7 day).

INSTALLER SETTING	
24 Hour	
5+2 Day	
7 Day	



WIRING CONVERSIONS

Wiring conversions for other timeswitches which can be replaced with the Danfoss TS715, refer to the second part of the table. If in any doubt, please contact our Technical Services Department before proceeding with the replacement.

DANFOSS RANDALL TS715	MAINS		
	⏚	N	L
	⏚	N	L
The existing wallplate may be used when replacing the following, but the wiring mu wire link between L & COM terminals of wallplate.			
ACL LS111, LS711, LP111 & LP711	⏚	N	L
DRAYTON TEMPUS ONE & TEMPUS TWO	⏚	N	L
LANDIS & GYR RWB3	⏚	N	L
LANDIS & GYR RWB30	⏚	N	L
The TS75/TS15 wallplate must be used to replace the existing wallplate when repla mains voltage systems, fit wire link between terminal 1 & L of wallplate.			
GRASSLIN 45, 45A, 45E	⏚	2	1
HONEYWELL ST6100	⏚	N	L
HORSTMANN 423 PEARL, EMERALD & TOPAZ	⏚	N	L
HORSTMANN KMK2A YMK2	⏚	3	4
HORSTMANN 425 CORONET	⏚	N	L
DANFOSS RANDALL 911	⏚	N	L
DANFOSS RANDALL 103, 103E, 103E5 & 103E7	⏚	5	6
RANDALL 3020	⏚	1,7	6
DANFOSS RANDALL SET1	⏚	N	L
RANDALL TSR2	⏚	3	2
PEGLER SUNVIC SP20 & SP25/30	⏚	N	L
POTTERTON MYSON EP4001	⏚	N	L

LOAD				An additional terminal block may be required where these disconnected leadss (or pairs of leads) should be terminated			
COM	OFF	SPARE	ON				
1	2	3	4	A	B	C	D

ust be reconnected as shown below. In addition, in mains voltage systems, fit

1	2	4	3				
1	3	4	2				
-	3	1	4	2			
2	3	1	4				

ıcing the following timeswitches. Wiring details are shown below. In addition, in

3	-		4				
1	2	3	4	-	-		
3	-	1	4	2	5	6	
1	-		2				
5	6	1	4	2	3		
5	4	2	6				
3	-	2	1				
-	-	2	4	3	5		
5	6	2	4				
1	-	4	5	6	7		
3	4	S	5				
5	2		4	A	B	C	D

DANFOSS RANDALL TS715	MAINS		
	⏚	N	L
	⏚	N	L
The TS75/TS15 wallplate must be used to replace the existing wallplate when repla mains voltage systems, fit wire link between terminal 1 & L of wallplate.			
SANGAMO M6	⏚	4,5	6
SANGAMO 410 FORM 8	⏚	4,5	3
SANGAMO S254 FORM 2, S408 FORM 5, S251 FORM 2	⏚	N	L
SANGAMO S610 FORM 2, S611 FORM 2, S612 FORM 2, S408 FORM 4, S408 FORM 6, S253 FORM 2, S255 FORM 2	⏚	N	MOTOR LIVE
SANGAMO S409 FORM 8	⏚	3,N	3,L
SANGAMO S263 FORM 2 SANGAMO S264 FORM 2	⏚	N	L
SMITHS IND. MKI, MKII	⏚	N	L
SMITHS IND. CENTROLLER 30	⏚	1	2
SMITHS IND. CENTROLLER 40	⏚	1	2
SWITCHMASTER	⏚	N	L
TOWERCHRON TC	⏚	2	1
VENNER VENNERETTE MKIIA	⏚	N	L
VENNER VENNERETTE MKIVA	⏚	2	3
VENNER VENOTIME (WITH NEON INDICATING CIRCUIT ON)	⏚	N	L
VENNER VENOTIME (WITH NEON INDICATING POWER ON)	⏚	N	L
VENNER VENNERON, VENNERON P	⏚	3	2

LOAD				An additional terminal block may be required where these disconnected leadss (or pairs of leads) should be terminated			
COM	**OFF**	**SPARE**	**ON**				
1	**2**	**3**	**4**	**A**	**B**	**C**	**D**

ıcing the following timeswitches. Wiring details are shown below. In addition, in

3	2	7	1	8			
-	2	6	1	7	8		
-	-		LOAD				
SWITCH LIVE	-		LOAD				
6	-	1	2				
-	OFF		ON				
P2	-	P1	P3				
-	-	3	4,5	6			
-	-	3	4,5				
4	-	2	1	3			
4	-	3	7	8	9	10	11
LINE	-		LOAD				
4	-		1				
-	1	2	3				
2	1		3				
1	-		4				

User Instructions

Your timeswitch

The TS715 allows you to switch your system on and off at times that suit you.

You can programme up to 3 ON/OFF times per day, which will come on and go off at the same times.

Preset Programmes

Your TS715 comes ready programmed with a set of operating times which often suit most people.

Event No.	Hot Water & Heating	Mon-Fri	Sat-Sun**
1	1st ON	6:30	7:30
2	1st OFF	8:30	10:00
3*	2nd ON*	12:00*	12:00*
4*	2nd OFF*	12:00*	12:00*
5	3rd ON	17:00	17:00
6	3rd OFF	22:30	22:30

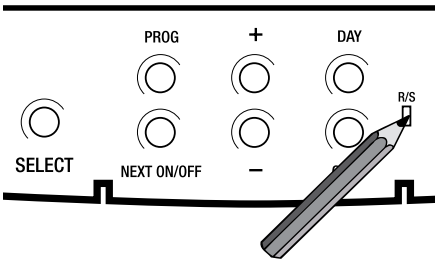
* Not applicable if unit set to 2 ON/OFFs per day by installer
**Not applicable if unit set to 24 hour mode by installer
See page 13 for explanations of different settings

If you want to change any of these settings, you can do so by following the instructions on pages 13-18. First, follow the steps on page 11-12 to set the correct time and date.

Before you start

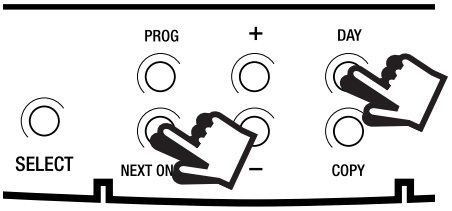
Open the flap on the front of the clock. Press the **RESET** button using a non-metallic object (e.g. pencil/matchstick) until you hear a click and the red light on the front of the unit flashes once.

This will reinstate the preset programmes and sets the time to 12.00pm on Monday (MO)



Choice of 24hr or AM/PM display

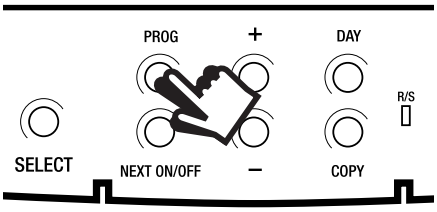
Press and hold **DAY & NEXT ON/OFF** for 1.5 seconds to toggle between 24hr clock and AM/PM display, as required.



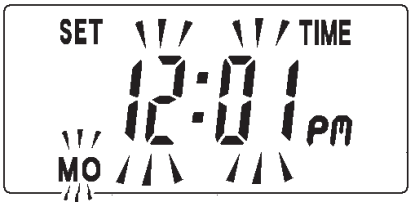
Setting the correct Time and Day

SETTING THE TIME

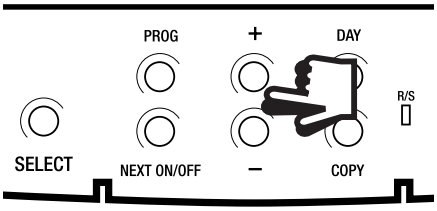
Press **PROG** once.



The words **SET TIME** will appear at the top of the display & the time will flash on and off.

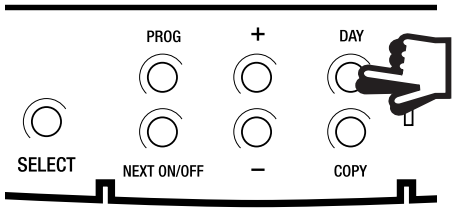


Use the **+ and - buttons** to set the correct time (press and hold to change in 10 min increments).



SETTING THE DAY

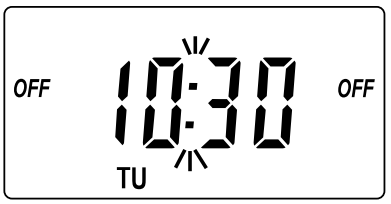
Press **DAY** repeatedly until the correct day of the week is displayed. MO is Monday, TU is Tuesday etc.



Accepting the preset programmes

If you are happy to use the preset programmes on page 10, you don't need to do anything else.

To accept the factory presets just press the **PROG** button until the time appears & colon in the display begins to flash.



Your unit is now in **RUN** mode and will control your heating and hot water according to the preset programmes.

Before you change the preset programmes

Your installer will have set your unit to operate in one of the following modes:

- **5/2 day** - one set of programmes for weekdays and another for weekends **(page 14-15)**
- **7 day** - different settings for each day of the week **(page 16-17)**
- **24 hour** - one set of programmes for the whole week **(page 18)**

! *See INSTALLER SETTING tick box on inside flap label to ascertain which mode your unit is set .*

INSTALLER SETTING	
24 Hour	
5+2 Day	
7 Day	

Please Note

The unit must be programmed in sequence and ON/OFF times cannot be set out of sequence.

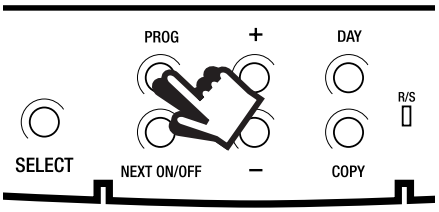
If you want to leave a preset time as it is, simply press **NEXT** to move on to the next setting

Your installer will have set your unit to programme either 2 or 3 ON/OFFs per day. If your clock has been installed to allow 3 ON/OFFs and you do not wish to use one of the ON/OFF settings, simply programme the ON time to be the same as the OFF time and the setting will not operate.

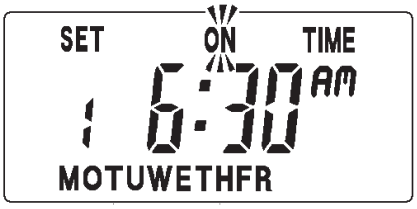
! *If at any time you get confused and need to reset your timings to the standard programme, press the RESET button to return to the preset programmes.*

Programming the heating & hot water in 5/2 day mode

1. Press **PROG** until **SET ON TIME** appears at the top of the display and **MOTUWETHFR** appears at the bottom of the display.

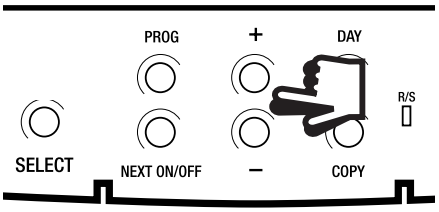


   Use the **+ and -** buttons to set the time you would like your system to first come on in the morning (Event 1).

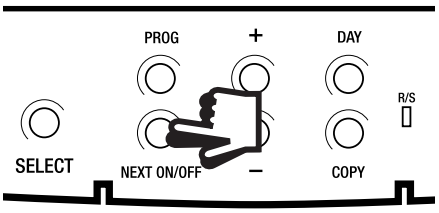


2. Press **NEXT ON/OFF** once only.

   Use the **+ and -** buttons to set the time you want your system to go off (Event 2).



   To move to the next setting, i.e. when you would like your system to come on again (Event 3) press the **NEXT ON/OFF** button again.



3. Continue programming the central heating & hot water system ON and OFF times for weekday Events 4, 5 & 6 as in Step 2.

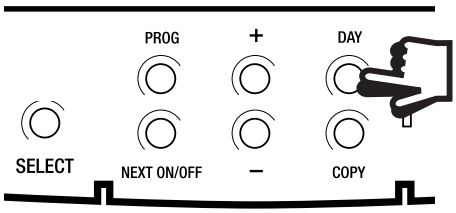
4. Press the **DAY** button once and **SASU** will appear at the bottom of the display.

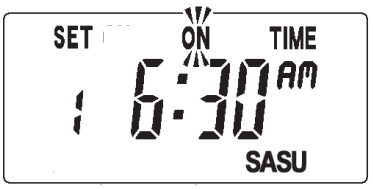
   Either press **COPY** to keep the same settings for Saturday and Sunday as you have programmed for Monday to Friday.

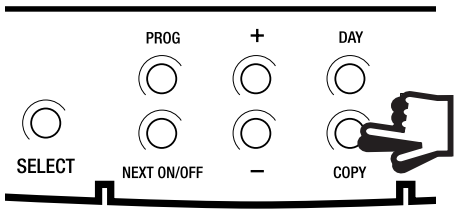
   Alternatively, programme new ON/OFF times by pressing the **NEXT ON/OFF** button to move to the next setting and using the **+ and -** buttons to set the time you want.

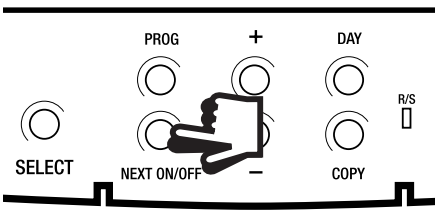
5. Press the **PROG** button to return the unit to RUN mode (time appears & colon in the display begins to flash)

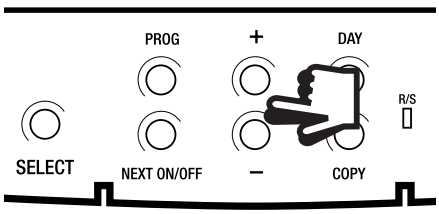
6. **Proceed to page 19.**

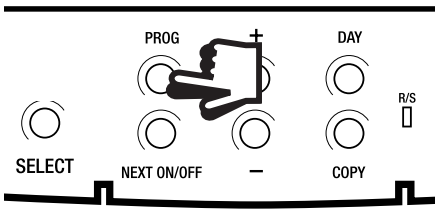






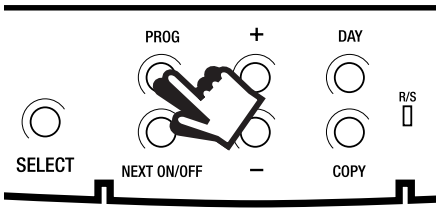




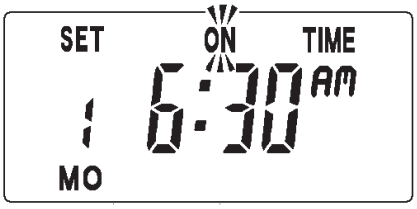


Programming the heating & hot water in 7 day mode

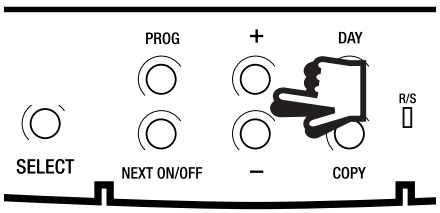
1. Press **PROG** until **SET ON TIME** appears at the top of the display and **MO** appears at the bottom of the display.



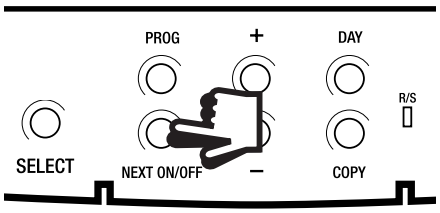
   Use the **+ and -** buttons to set the time you want your system to first come on in the morning (Event 1).



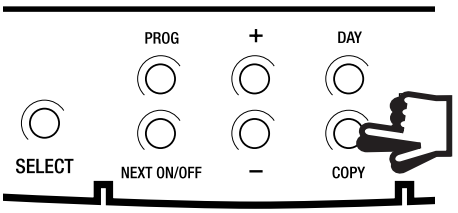
2. Press **NEXT ON/OFF** to move to Event 2.



   Continue programming the system ON and OFF times in this way by using the **+ and -** buttons to set the time you want and pressing the **NEXT ON/OFF** button to move to the next setting.



3. Press **DAY** button once only. **TU** will appear at the bottom of the display.



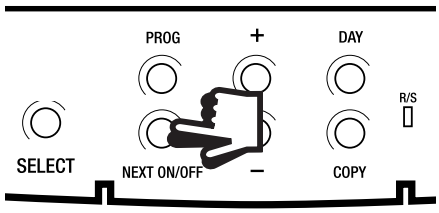
Continue programming the rest of the week by pressing:

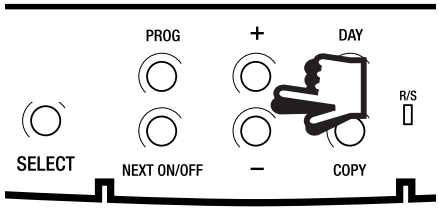
a) **NEXT ON/OFF** button to move to the next setting,

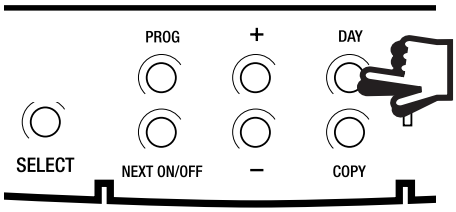
b) **+ and -** buttons to amend the time

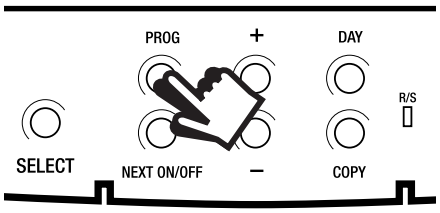
c) **DAY** to advance to the next day.

Alternatively press **COPY** to keep the same settings as the day before







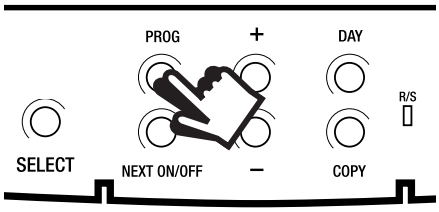


4. Press the **PROG** button to return the unit to **RUN** mode (time appears & colon in the display begins to flash)

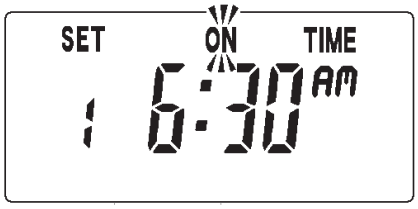
5. **Proceed to page 19.**

Programming the heating & hot water in 24 hour mode

1. Press **PROG** until **SET ON TIME** appears at the top of the display.

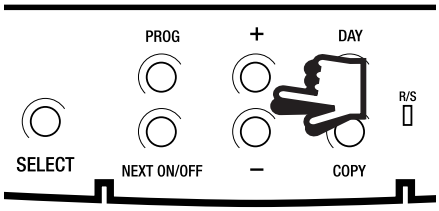


   Use the **+ and -** buttons to set the time you want your system to first come on in the morning (Event 1).



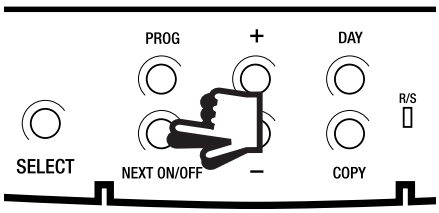
2. Press **NEXT ON/OFF** to move to Event 2.

   Continue programming the system ON and OFF times by pressing:

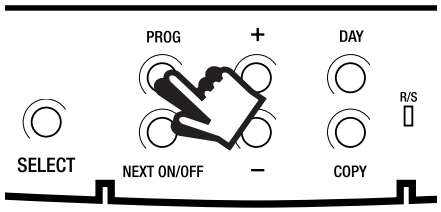


   a) **NEXT ON/OFF** button to move to the next setting,

   b) **+ and -** buttons to amend the time

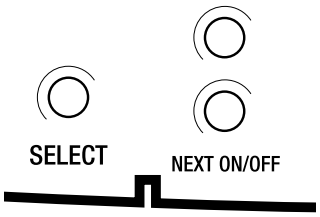


3. Press the **PROG** button to return the unit to RUN mode (time appears & colon in the display begins to flash)



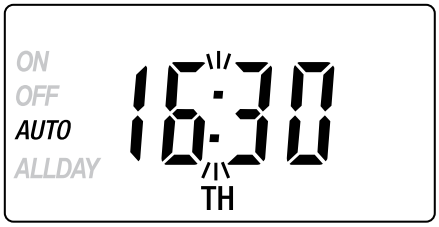
4. **Proceed to page 19.**

Running your Programme



To run the programme:
press the **SELECT** button.

As you press the **SELECT** button the display will change between **ON, OFF, ALLDAY** and **AUTO**.

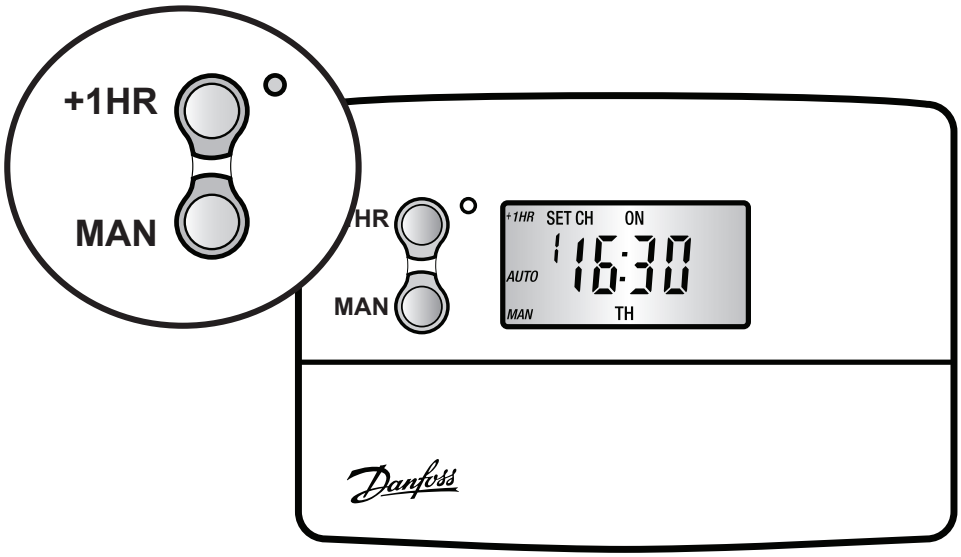


- **AUTO** = the system will come on and go off at the programmed times
- **ON** = the system will remain on constantly
- **OFF** = the system will not come on
- **ALLDAY** = the clock will turn the system on at the first programmed ON and will leave it on until your last programmed OFF

Select the option you require depending on your circumstances, time of year, etc.

Temporary override buttons

Sometimes you may need to change the way you use your heating temporarily, i.e. due to unusually cold weather. The TS715 has two convenient overrides which can be selected without affecting the set programme.



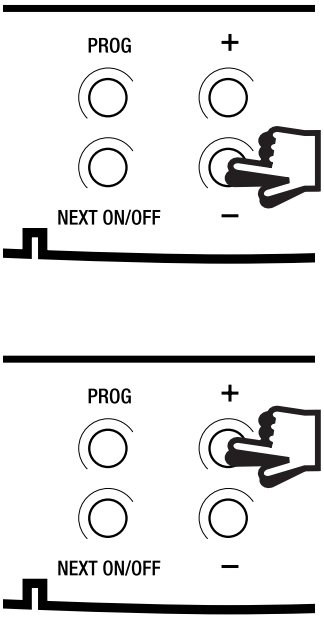
Override buttons

+1HR = pressing this button when the unit is in AUTO or ALLDAY mode will cause the system to remain on for an extra hour. If it is pressed while the unit is OFF, the system will come on immediately for 1 hour then go off again.

MAN = pressing this button when the unit is in AUTO or ALLDAY mode will cause the system to go OFF until the next programmed ON, or vice versa.

Changing clocks forward & back

Open the flap on the front of the unit to reveal the programming buttons.



To change from **Summer to Winter** (clocks back) -

❑ **press and hold - button**

To change from **Winter to Summer** (clocks forward) -

❑ **press and hold + button**

NOTE: After the first time this change has been made this feature will only allow the clock to be changed in the opposite direction.

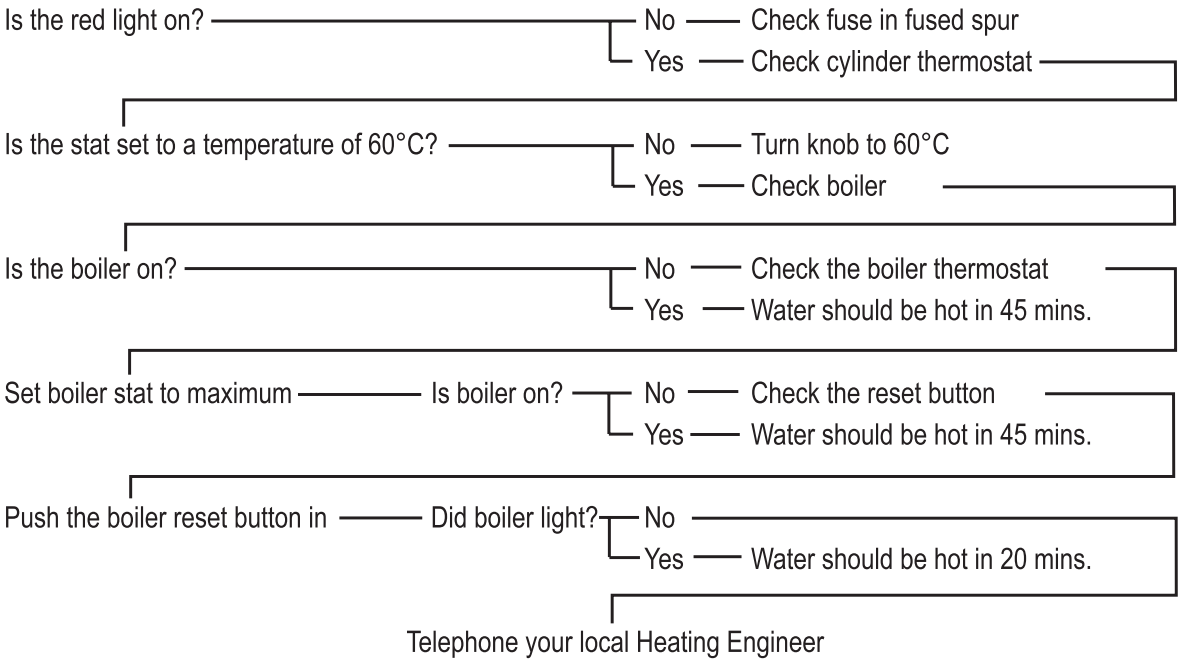
Take care when making this change for the first time. If it is made in the wrong direction the unit will have to be reset and any user-settings re-entered

(see pages 11-12 on how to Reset the unit and how to set the Time and Day).

Fault Check List

No Hot Water

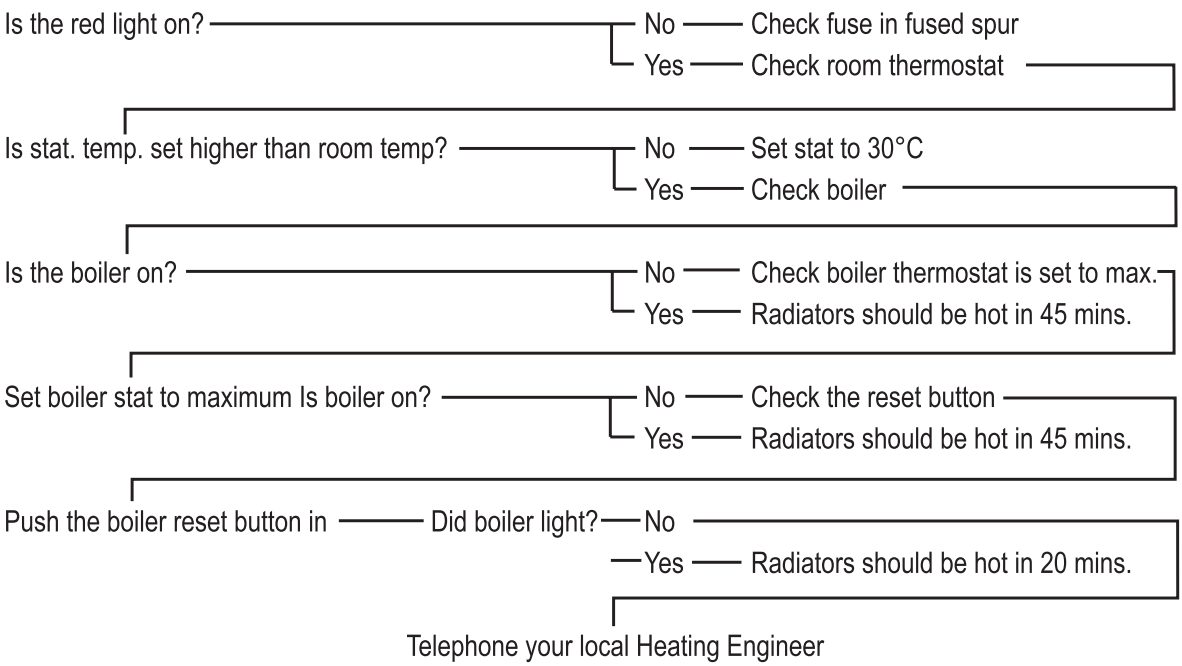
Check TS715 programmer. Make sure selector is set to ON.



After the water has been heated, return the programmer and other controls to the required settings.

No Heating

Check TS715 programmer. Make sure selector is set to ON.



After the heating has come back on, return the programmer and other controls to the required settings.

Still having problems?

Call your local heating engineer:

Name: .....

Tel: .....

Visit our website:

www.danfoss-randall.co.uk

Email our technical department:

drl_technical@danfoss.com

Call our technical department

0845 121 7505
(8.45-5.15 Mon-Thurs, 8.45-4.45 Fri)

For a large print version of these instructions please contact the Marketing Services Department on 0845 121 7400.

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